

**Wyckoff Eagle Harbor Superfund Site
Ecology – EPA Remedial Alternatives Conference Call
7/9/14
FINAL Meeting Summary**

MEETING ATTENDEES

Rick Albright, EPA	Jim Pendowski, Ecology (partial, phone)
Cami Grandinetti, EPA	Barry Rogowski, Ecology
Howard Orlean, EPA	Chung Yee, Ecology
Helen Bottcher, EPA	Sandra Caldwell, Ecology
	Dawn Hooper, Ecology
	Kate Snider, Floyd Snider

This meeting summary was prepared by Kate Snider and reviewed by all attendees. It is not a full record of the discussion, but a record of key discussion points and action items.

MEETING PURPOSE AND AGENDA

This conference call was held to follow up on the 6/23 Remedial Alternatives workshop, and subsequent email communication between Howard and Chung regarding a new proposed Alternative 7 for the Point.

Meeting Agenda:

1. EPA overview of the proposed Alternative 7 concept, and associated rationale
2. Next steps and plan for coming months

PROPOSED ALTERNATIVE 7 CONCEPT

- On July 8, Howard distributed an email including the attached pdf describing the proposed Alternative 7. Howard's email stated:

Positive aspects of the new alternative include:

1. Cash flow is spread out over a longer period
2. There are several points in implementation schedule where we can stop, monitor and determine whether RAOs are met prior to moving to the next step, if necessary.
3. Uses differing technologies throughout
4. Costs are comparable to ISS and may be significantly less if we determine that the follow-on steps are not needed.

Negative aspects of the new alternative include:

1. GWTP O & M may continue to 2026.
 2. May not involve significant cost or time savings if follow-on steps are needed.
- Howard described that Alt 7 includes a sequence of remedial action steps, with monitoring following implementation of each step to determine whether RAOs have been met, and whether subsequent steps are necessary. This is an "adaptive management" proposal which could have the potential to save cost overall.

- Howard described that the steps would include:
 - Preconstruction activities
 - ISS in core (not perimeter as stated in the pdf), and likely also jet grouting of deep DNAPL in north
 - Monitoring to determine status re: RAOs
 - Upgrade outfall if additional treatment is necessary
 - Hot water flushing of perimeter areas (not steam enhanced as stated in the pdf)
 - Monitoring to determine status re: RAOs
 - Perimeter wall upgrades and passive groundwater treatment system installation if necessary
 - Final site cap
 - EPA would operate the treatment plant during this full process, after the start of remedial construction.
- Concept level cost estimate assumes:
 - ISS and hot water flushing would target 10% RE
 - All steps would ultimately be implemented
- The schedule presented for the process is optimistic, it does not include significant time for the monitoring and decision making between steps.
- As presented, the cost for Alt 7 is roughly equivalent to Alt 4 (full ISS), and more than double the remedial action duration. Costs and duration would be less if all remedial action steps are not necessary.
- EPA clarified that Alt 7 is not necessarily the EPA preferred alternative.
 - EPA will ask CH2M Hill to develop Alt 7 for inclusion in the FFS
- Hot water flushing has not previously been presented as a remedial technology for the site, CH2M Hill will need to add the technology description and evaluation of effectiveness for site conditions.
- The rationale for including Alt 7 is to vet all options thoroughly, and to make sure that an alternative that presents an adaptive monitoring approach is presented to the Remedy Review Board.
- Cami emphasized that the Remedy Review Board will expect evaluation of alternatives that allow for phasing and adaptive management.
- With Alt 7, park construction would not begin until 2027 at the earliest. If adaptive management and phased implementation of other alternatives, then those would have longer duration as well.
- ***Barry asked that the team also develop schedule and costs for phased implementation of Alternative 4.***
- Ecology team questioned how the definition would be made in Alt 7 regarding the extent of “the Core” to receive initial ISS. Could the phased approach be based on

mobility testing? If mobility testing is performed during design, instead of implementing initial ISS at an area called “the Core”, would it make more sense to implement initial ISS in those areas of the site containing mobile NAPL, for example above 40% RE. This would need to be done with an understanding of ISS access to that treatment volume, and maintaining options for further treatment of additional NAPL under subsequent steps.

NEXT STEPS AND PLAN FOR COMING MONTHS

- EPA estimates the revised schedule for the FFS and Proposed Plan to be as follows:
 - Draft FFS – October 1, 2014 including Alt 7
 - Remedy Review Board – last week of October, 2014
 - Proposed Plan – February 28, 2015 – develop following input from RRB. RRB comments are typically provided within a few weeks of meeting.
 - Formal public comment process – spring 2015
 - ROD Amendment – October 31, 2015
- Howard needs to work through this schedule with the CH2M Hill Team.
- ***EPA agreed to the following next steps:***
 - Direction to CH2M Hill to develop Alternative 7 to a similar level as other alternatives
 - Direction to CH2M Hill to evaluate costs and schedule for phasing/adaptive management of Alternatives 4 and 5
 - Comparative analysis in FFS to evaluate that full suite of alternatives
 - Development of revised schedule for FFS and proposed plan
 - ***EPA to provide updated SSC milestone dates prior to conference call scheduled for 7/23.***
- Ecology is acceptant of this approach, especially given the clarification that EPA has not determined that Alt 7 is their preferred alternative. Ecology stated that it is possible that having an additional alternative (Alternative 7) may be good. However, Alt 7 is not at this point Ecology's preferred alternative for a number of technical and policy reasons. Ecology believes Alt 7 will create delays in the overall project, with a significant amount of uncertainty regarding: treatment plant operations and responsibility; performance standards and decision-making process for each remedial step; long-term O&M requirements for passive groundwater treatment; and community understanding of ultimate conditions and impacts; with longer (and uncertain) duration before park construction can begin.